

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

PAICE LLC,

Plaintiff,

v.

TOYOTA MOTOR CORP., et al.,

Defendants.

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CIVIL ACTION NO. 2:04-CV-211

MEMORANDUM OPINION & ORDER

Before the Court are Paice and Toyota's Post-Hearing Proposed Findings of Fact and Conclusions of Law. Dkt. Nos. 261, 263 & 264. Also before the Court is the transcript and evidence from the remand hearing on prospective damages, which was held on July 21, 2008. *See* Dkt. Nos. 253-256 (minutes, exhibit list, witness list, and transcript). Having considered the papers in light of the testimony, evidence, and relevant case law, the Court hereby establishes an ongoing royalty rate, as a percentage of wholesale vehicle price, of 0.48% on each Toyota Prius, 0.32% on each Toyota Highlander, and 0.26% on each Lexus RX400h sold for the remaining life of U.S. Patent No. 5,343,970 ('970 Patent).

I. BACKGROUND

Paice filed this lawsuit in June 2004, alleging patent infringement by three of Toyota's vehicles—the Toyota Prius, Toyota Highlander SUV, and Lexus RX400h SUV. Dkt. No. 1. A jury determined, in December of 2005, that Paice's '970 Patent was valid and infringed by Toyota under the doctrine of equivalents; the jury awarded Paice \$4,269,950 in damages for Toyota's past infringement. *See* Dkt. No. 199. The Court subsequently denied both parties' motions for judgment as a matter of law (Dkt. Nos. 208 & 209). Dkt. Nos. 225 & 226.

In light of the Supreme Court's decision in *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006), this Court denied Paice's motion for a permanent injunction (Dkt. No. 207). Dkt. No. 227; *Paice LLC v. Toyota Motor Corp. (Paice I)*, No. 2:04-CV-211, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006), *aff'd in part, vacated in part, and remanded*, 504 F.3d 1293 (*Paice II*) (Fed. Cir. 2007), *cert. denied*, 128 S.Ct. 2430 (2008). The Court entered its Final Judgment August 16, 2006. Dkt. No. 228. The Court awarded damages for past infringement in the amount found by the jury and established, dividing the jury's lump-sum damages award for past infringement by the number infringing vehicles sold, an ongoing royalty rate of \$25 per infringing vehicle for the remaining life of the '970 Patent. *Id.*

Both parties contested issues on appeal. Toyota challenged the infringement verdict while Paice challenged both the lack of a literal infringement finding and the imposition of an ongoing royalty by the Court. *Paice II*, 504 F.3d at 1296. The Federal Circuit affirmed the infringement verdict under the doctrine of equivalents as well as the Court's denial of Toyota's motion for judgment as a matter of law on this issue. *Id.* at 1312. Likewise, the Federal Circuit affirmed the verdict of no literal infringement and the Court's denial of Paice's cross-motion for judgment as a matter of law on this issue. *Id.* at 1313.

With respect to the ongoing royalty rate, because this Court did not provide a basis in its judgment for the \$25 per vehicle ongoing royalty, the Federal Circuit was "unable to determine whether the district court abused its discretion in setting the ongoing royalty rate." *Paice II*, 504 F.3d at 1315. "Accordingly, we think it prudent to remand the case for the limited purpose of having the district court reevaluate the ongoing royalty rate. Upon remand, the court may take additional evidence if necessary to account for any additional economic factors arising out of the imposition

of an ongoing royalty.” *Id.* “[T]he district court may wish to allow the parties to negotiate a license amongst themselves regarding future use of a patented invention before imposing an ongoing royalty. Should the parties fail to come to an agreement, the district court could step in to assess a reasonable royalty in light of the ongoing infringement.” *Id.* at 1315; *see id.* at 1317 (requiring the district court to afford the parties an opportunity to set the rate, but noting the court retains jurisdiction to impose a rate if the parties cannot agree) (Rader, J., concurring). The Circuit additionally concluded that Paice failed to show that the Court’s imposition of an ongoing royalty rate without a jury finding for prospective damages, violated Paice’s Seventh Amendment rights. *Id.* at 1316.

As the Circuit recommended, the Court has given the parties full and fair opportunity to set their own ongoing royalty rate. *See Paice, LLC v. Toyota Motor Corp.*, No. 2:07-CV-180, Dkt. No. 38, at 25-26, 30, 35 (transcript of hearing on Paice’s Motion to Strike wherein both parties stated they had been through a mediation session and other discussions and had exhausted efforts to set an ongoing royalty rate).¹ Unfortunately, the parties were unable to reach an agreement. *Id.* Accordingly, on July 21, 2008, the Court held a one-day evidentiary hearing on the ongoing royalty issue. *See* Dkt. Nos. 253-256. The Court herein undertakes the task of determining the appropriate ongoing royalty rate, in accordance with the Federal Circuit’s guidance.

¹ In relevant part, the transcript reads: “The Court: Have the parties had what they considered to be adequate time and effort to try to resolve this issue of future royalties? Mr. Cordell: Certainly on the part of Paice we believe we have, your honor. We believe that the mediation that we attempted in December was that effort and, you know, the parties gave it the full day and we gave it the old college try.” *Paice, LLC v. Toyota Motor Corp.*, No. 2:07-CV-180, Dkt. No. 38, at 26.

“The Court: Well, let me also ask you the first question. Do you feel that more time is needed to try to follow the directives of the Federal Circuit, or do you feel those have been exhausted in trying to work through this issue? Mr. Badenoch: I think we have realistically done our best for now. There may be something that comes along that’s going to change the perception. Generally, the parties have been reasonably, you know, amicable about calling each other up when they think there’s something that might break something, you know. . . . The Court: I just want to make sure the parties are satisfied we have followed the directives of the Circuit. Mr. Badenoch: Correct, your honor, I think that we have.” *Id.* at 30.

II. LEGAL PRINCIPLES

The Supreme Court, in *eBay*, reversed the Federal Circuit’s general rule that favored the imposition of permanent injunctions in patent cases. 547 U.S. at 394. In place of the Federal Circuit’s general rule, the Supreme Court reinstated the four-factor test for injunctive relief that has been applied for quite some time in other areas of the law. *Id.* Since *eBay*, various courts have struggled with the equitable concept of prospective damages in lieu of the patentee’s “right to exclude,”² when injunctive relief is not appropriate under the *eBay* four-factor framework.³

The Federal Circuit has made it clear that damages for past infringement are separate and distinct from damages for future acts of infringement and may require different royalty rates given the change in the parties’ legal relationship, among other factors. *Paice II*, 504 F.3d at 1317 (Rader, J., concurring); *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1362 (2008) (“There is a fundamental difference, however, between a reasonable royalty for pre-verdict infringement and damages for post-verdict infringement. Prior to judgment, liability for infringement, as well as the validity of the patent, is uncertain, and damages are determined in the context of that uncertainty. Once a judgment of validity and infringement has been entered, however, the calculus is markedly different because different economic factors are involved.” (citations omitted)).

District courts have frequently looked to *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970) for guidance on reasonable royalty damages assessment.

² See 35 U.S.C. § 154(a)(1) (“Every patent shall contain a short title of the invention and a grant to the patentee . . . the **right to exclude others** from making, using, offering for sale, or selling the invention . . .”) (emphasis added).

³ See, e.g., Bernard H. Chao, *After eBay, Inc. v. MercExchange: The Changing Landscape for Patent Remedies*, 9 MINN. J.L. SCI. & TECH 543 (2008); George M Newcombe, et al., *Prospective Relief for Patent Infringement In a Post-eBay World*, 4 N.Y.U. J.L. & BUS. 549 (2008); Eric Keller, Note, *Time-Varying Compulsory License: Facilitating License Negotiation for Efficient Post-Verdict Patent Infringement*, 16 TEX. INTELL. PROP. L.J. 427 (2008).

See also Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1555, 1567, 1577 (Fed. Cir. 1995) (approving of the *Georgia-Pacific* analysis for determining reasonable royalty damages). The *Georgia-Pacific* Court set forth fifteen factors to be considered in a reasonable royalty analysis. *Id.* at 1120. The central premise underlying the *Georgia-Pacific* analysis is that of a fictional hypothetical negotiation occurring at the time infringement began, between a willing licensor and willing licensee for the technology-at-issue. *See id.*

Many of the factors noted by the *Georgia-Pacific* Court are also seemingly applicable to an ongoing royalty rate analysis. A post-judgment, ongoing royalty negotiation, however, is logically different from the pre-trial hypothetical negotiation discussed in *Georgia-Pacific*. In the case of an ongoing royalty, the hypothetical negotiation occurs post-judgment; therefore, the “willing licensee” in this negotiation is an adjudged infringer, unlike the situation described in *Georgia-Pacific*.

In many ongoing royalty negotiations, the threat of a permanent injunction serves as a big stick, essentially framing negotiation in terms of how much an adjudged infringer would pay for a license to continue its infringing conduct. However, when an injunction is not proper under *eBay*, the question instead becomes: what amount of money would reasonably compensate a patentee for giving up his right to exclude yet allow an ongoing willful infringer to make a reasonable profit? *See Georgia-Pacific*, 318 F. Supp. at 1120 (factor 15). It is under this modified *Georgia-Pacific* framework that the Court proceeds.

III. DISCUSSION

A. The Jury’s Damages Award for Toyota’s Past Infringement

The jury found for Paice in this lawsuit and awarded, for past infringement, the sum of \$3,348,475 for the Prius vehicle and \$921,475 for the Highlander and Lexus RX400h vehicles, for

a grand total of \$4,269,950. Dkt. No. 199. Although the Court felt the jury's award was low, neither party moved the Court with regard to the amount of damages.⁴ Both parties filed motions for judgment as a matter of law, but neither motion addressed the amount of damages awarded by the jury. *See* Dkt. Nos. 208 & 209. Paice additionally filed a motion for permanent injunction, but did not challenge the damages award in that motion either. *See* Dkt. No. 207. Having heard no challenge to the jury's damages assessment, the Court, after denying Paice's motion for permanent injunction and both parties' motions for judgment as a matter of law, entered a final judgment, assessing damages for past infringement in the amount found by the jury. Feeling itself bound by the jury's award, the Court carried that amount forward, dividing it by the number of infringing vehicles sold, to establish an ongoing royalty rate of \$25 per infringing vehicle. *See* Dkt. No. 228.

At the time final judgment was entered, the Court made no assessment regarding the reasonableness or propriety of using the jury's award of damages for past infringement as the basis for an ongoing royalty rate. The Court acknowledges that, while it could speculate, there is no way to know for sure what formed the basis of the jury's lump-sum monetary award for past infringement. Accordingly, in light of the direction provided by the Federal Circuit, it is impossible for the Court to determine, without considering additional evidence and testimony, whether the jury's damages award for past infringement, as calculated on a per-vehicle basis, will appropriately compensate Paice for Toyota's ongoing and willful infringement.

⁴ The Court acknowledges that it has the authority to order a new trial when a damages award is either inadequate or excessive. *See* Fed. R. Civ. P. 59(d) ("court, on its own, may order a new trial for any reason that would justify granting one on a party's motion"); *Gasperini v. Center for Humanities, Inc.*, 518 U.S. 415, 434-33 (1996). However, in order to do so, the Court must find that the damages award lacks rational connection to the evidence such that it "shocks the conscience" of the Court. *See Haley v. Pan Am. World Airways, Inc.*, 746 F.2d 311,317 (5th Cir. 1984). Such was not the case here. *See General Mills, Inc. v. Calumet Harbor Terminals, Inc.*, 47 F.R.D. 189, 190-91 (N.D. Ill. 1969) (court cannot grant a new trial for low jury damages assessment unless it is arbitrary and unreasonable).

Toyota argues, under *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363 (2008), that the jury's damages award for past infringement may appropriately be used as the ongoing royalty rate. Although the Court does not disagree with Toyota's general premise, the Court disagrees with Toyota that *Innogenetics* applies to the facts of this case. *Innogenetics* involved a situation where the jury clearly awarded damages for past infringement ***as well as prospective damages for future infringement***. 512 F.3d at 1380. Such is not the case here as the jury only awarded lump-sum damages for Toyota's past infringement; the jury did not consider the issue of prospective relief. *See* Dkt. Nos. 198 (jury instructions) & 199 (verdict form). The Court finds that changed circumstances in this case warrant a different ongoing royalty rate.

B. Changed Circumstances

The parties' damages and technical experts used widely divergent approaches to analyze the ongoing royalty rate issue. Paice's damages expert, Dr. Troxel, conducted a new hypothetical negotiation after the legal status of the parties had changed as a result of the jury's verdict and Court's final judgment. Dkt. No. 263, at 10-11. On the other hand, Toyota's damages expert, Dr. Rapp, started with the deduced jury royalty as a baseline and then adjusted it downward based on post-judgment changes in Toyota's "incremental hybrid profit." Dkt. No. 261, at 25.

The parties apparently agree that the ongoing royalty rate should be considered in light of a post-judgment hypothetical negotiation. *Compare* Dkt. No. 263, at 10-11 (arguing that August 17, 2006 is the proper date to use for the ongoing royalty hypothetical negotiation) *with* Dkt. No. 261, at 23 (arguing the hypothetical negotiation should be analyzed as of August 2006). What the parties seem to primarily disagree about is how the jury's damages award for past infringement should factor into the new calculus and what other factors, if any, should be considered.

The Court finds, for the reasons set forth below, that neither party's approach is completely persuasive. The Court agrees for the most part with the factors to be considered in an ongoing royalty analysis set forth by Paice, but the Court finds two significant faults with Paice's analysis. The Court also finds Toyota's "incremental hybrid profit" approach is fundamentally flawed in several respects.

1. Toyota's Approach

A systemic flaw throughout Toyota's analysis is its overt failure to consider the change in the legal status of the parties that resulted from the verdict and judgment in this case. Toyota essentially contends the pre-trial negotiation back in 2003 and the post-judgment negotiation in 2006 are identical except for Toyota's changed "incremental hybrid profits." Toyota never considers the fact that its continued infringement is willful and that a new lawsuit by Paice would likely result in treble damages and could potentially be considered an exceptional case.⁵ Rather, Toyota contends that because the Court denied Paice's motion for a permanent injunction, the determination of an ongoing royalty should be "considered through the same legal framework as the reasonable royalty analysis for past damages." Dkt. No. 261, at 22.

The Court finds both *Paice II* and *Amado* counsel otherwise. Both the majority and concurrence in *Paice II* instructed the district court on remand to consider the changed circumstances

⁵ It seems that Paice could easily show, by clear and convincing evidence, that Toyota's continued infringement constitutes action "despite an objectively high likelihood that its actions constituted infringement of a valid patent." *See In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc). *See id.* at 1381 ("Among the available [enhanced damages] remedies are treble damages for willful infringement." (citing *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964))). *See also* 35 U.S.C. § 285 (providing that trial court may in exceptional cases award reasonable attorneys fees to the prevailing party); *Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp.*, 459 F.3d 1311 (Fed. Cir. 2006) ("Exceptional cases usually feature some material, inappropriate conduct related to the matter in litigation, such as willful infringement, fraud or inequitable conduct . . ."); *nCube Corp. v. Seachange Int'l, Inc.*, 436 F.3d 1317 (Fed. Cir. 2006) ("Criteria for declaring a case exceptional include willful infringement, bad faith, litigation misconduct, and unprofessional behavior." (citation omitted)).

in light of the ongoing infringement. *See Paice II*, 504 F.3d at 1315 (“Should the parties fail to come to an agreement, the district court could step in to assess a reasonable royalty *in light of the ongoing infringement*. . . . The district court should also take the opportunity on remand to consider the concerns Paice raises about the terms of Toyota’s permissive continuing use.” (emphasis added)); *id.* at 13115-17 (Rader, J., concurring). Toyota contends *Amado* is inapt because a permanent injunction was imposed in that case. Dkt. No. 261, at 21. The Court disagrees. Injunction or no injunction, pre-suit and post-judgment licensing negotiations are necessarily different due at least to the change in legal status of the parties. Once judgment is entered, ongoing infringement by the adjudged infringer is willful; that factor, along with the potential for enhancement, the potential impact of *res judicata*, and many additional factual factors significantly change the ongoing royalty negotiation calculus.

Second, Toyota contends it could implement a non-infringing alternative for somewhere between \$5 to \$17 per vehicle. Dkt. No. 261, at 18-19. Toyota further contends that “the Court may consider the availability to Toyota of a non-infringing alternative *and the cost to implement the same*.” *Id.* at 25. Toyota claims the Court should not consider such costs as they are “not related to the value of Paice’s invention.” The Court disagrees. Further, the costs to retool its factories would necessarily be part of “the cost to implement the [non-infringing alternative],” which Toyota agrees should be considered by the Court. *See* Dkt. No. 261, at 25. Indeed, Toyota fails to explain how it could “implement” the non-infringing alternative without incurring the cost of retooling its factories. However, Toyota fails to consider switching costs in its calculations regarding the alleged non-infringing alternative. *See id.* at 18-19, 25. In a post-judgment negotiation, where the licensee is an adjudged infringer and continues to willfully infringe by choice, the cost of switching to an

alternative design is a factor that the parties would consider in arriving at an appropriate ongoing royalty rate.

Third, to arrive at an ongoing royalty rate, Toyota adjusts the jury's award for past infringement proportionally based on Toyota's post-judgment "incremental hybrid profit," which represents "the benefit it derives from selling hybrid vehicles as compared to non-hybrids." Dkt. No. 261, at 25. However, this method fails to account for the change in legal status of the parties, fails to consider Toyota's entire product line, and fails to consider the fact that Toyota can raise prices to compensate for increased costs. Toyota seems to suggest that if it decided to sell all of its hybrid vehicles at cost, thereby shifting all of its profit to its non-hybrid vehicles, it should no longer be required to pay any royalties to Paice. Indeed, Dr. Rapp concluded that due to increased raw materials costs, any profits attributable to the Toyota SUV models (Highlander and Lexus) are cancelled out—the royalty rate for these SUV vehicles alone should be zero. *See* Dkt. No. 256, at 112:13–114:3; 224:25–229:15. Dr. Rapp then averaged these SUV "zeros" in with his royalty calculation for the Prius (\$20.68), to arrive at a weighted average royalty per vehicle of \$15.78. *Id.*⁶ Dr. Rapp never considered the fact that Toyota could simply choose to raise its prices and pass along any increased costs to the consumer; Toyota is in control, at least in part, of its "incremental hybrid profits," especially considering that demand for its vehicles substantially exceed supply. *See* Dkt. No. 256, at 89:11–18.

It is easy to play a shell game with profits and costs; the Court finds Toyota's "incremental hybrid profit" analysis takes advantage of such a game. Toyota's position is that the \$25 royalty for

⁶ The Prius accounts just over 76% of all the infringing sales, while the SUVs account for the remainder. *See* Dkt. No. 265, at 113:1–25; *id.* at 226:6–229:15.

past damages should actually be *reduced* to \$16 on an ongoing basis because Toyota has experienced increased costs and is no longer making as much profit on the infringing vehicles that is attributable to “hybridness.” *See* Dkt. No. 261, at 25.⁷ However, Toyota controls its pricing as well as its conduct; if Toyota’s hybrid vehicles are no longer profitable, it can choose to cease its infringing conduct or simply pass increased production and material costs along to the consumer.

Fourth, Toyota additionally claims its analysis is bolstered by consideration of two license agreements: a Toyota-GE agreement and a Toyota-Ford agreement. Dkt. No. 261, at 11-15. However, the Court finds these agreements do not account for the changed legal relationship between Toyota and Paice in this case and that neither of the license agreements cover technology that is as valuable as that covered by Paice’s ’970 Patent. The Ford license covers the early Prius I technology, which has been abandoned by Toyota in favor of the technology covered by Paice’s patent. *See* Dkt. No. 256, at 54:14–60:3. Further, Ford is not an adjudged infringer of any of Toyota’s patents—that agreement was therefore unrelated to a jury’s finding of infringement and award of damages. As for the GE Agreement, it also was not related to any adjudication of infringement and covers technology that is not even used in the infringing vehicles. *See id.* at 33:23–34:2, 47:7-23, 179:13–180:16; Plaintiffs’ Exh. 307.

In sum, the Court finds Toyota’s incremental hybrid profit analysis unsupported by these license agreements and ultimately unpersuasive at best.

⁷ Even though Toyota’s damages expert did not testify at trial (Dr. Jarosz), Paice’s expert, Dr. Troxel, criticized Dr. Jarosz’s reasonable royalty calculation for Toyota’s past infringement of \$50. *See* Dkt. No. 256, at 23-24.

2. Paice's Approach

Paice first analyzes the differences between the jury's damages award for past infringement and an award of ongoing royalties for continued infringement. Dkt. No. 263, at 11-17. Paice concludes, and the Court agrees, that significant changes justify reconsideration of an ongoing royalty. First, the change in the legal relationship between the parties justifies a different ongoing royalty rate. Toyota is now an adjudged infringer of a valid patent, according to the jury and this Court's final judgment. That verdict and judgment has been affirmed on appeal. *Paice II*, 504 F.3d at 1316. Toyota's continued infringement is both voluntary and intentional. Failing to take into account the change in legal relationship between the parties would be manifestly unjust to Paice. *See Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1158-59 (6th Cir. 1978) ("Determination of a reasonable royalty, after election [of risking an infringement finding] cannot without injustice, be treated as though the infringer had elected [to negotiate a license] in the first place."). Failing to consider the parties' changed legal status would create an incentive for every defendant to fight each patent infringement case to the bitter end because without consideration of the changed legal status, there is essentially no downside to losing.

Second, Paice notes that the price of oil, and thus gasoline, has skyrocketed since this case has been remanded—the price per barrel of oil reaching as high as \$143. Paice contends, and the Court agrees, that higher oil and gas prices make the fuel efficiency advantages of the Paice technology even more valuable. Dkt. No. 263, at 18. The rise in gasoline prices has significantly increased Toyota's hybrid sales, which have more than doubled for the Prius. Dkt. No. 265, at 88:18–89:7. In fact, Toyota's hybrid sales have grown from 4,700 units per month at the time of the first hypothetical negotiation to 13,000 per month in 2006 and over 20,000 per month in 2008. *Id.*

at 89:19–90:2. This calculates to be nearly a 450% increase. Additionally, as a result of using Paice’s technology, Toyota has been able to capture about 80% of new hybrid customers. *Id.* at 88:18–89:7. The Court acknowledges that oil prices have abated somewhat but hybrid technology continues to be a hot topic with the consuming public because gas prices may once again rise to these spectacular levels. These facts altogether indicate the overwhelming popularity and commercial success of Toyota’s hybrid vehicles. *See Georgia-Pacific*, 318 F. Supp. at 1120 (factor 8).

Third, modifications to federal fuel efficiency laws, such as the Corporate Average Fuel Economy (CAFE) standards, mandate that automakers increase fleetwide gas mileage to 35 miles per gallon by 2020. *See Energy Independence and Security Act of 2007*, Pub. L. No. 110-140, §102, 121 Stat. 1492, 1499; Dkt. No. 256, at 88:15-17. When considering Toyota’s vehicle fleet as a whole, there is little doubt that Toyota’s offering of hybrid vehicles helps it meet the CAFE standards. These facts indicate Paice’s technology has value to Toyota well beyond mere profit. *See Georgia-Pacific*, 318 F. Supp. at 1020 (factors 11& 15).

Fourth, Toyota’s dominance in the hybrid industry and the popularity of its infringing vehicles have enhanced Toyota’s reputation as a “green” company. Dkt. No. 265, at 93:17–94:25. The demand for Toyota’s hybrid vehicles has been so high that some dealers have been holding raffles to allow customers to bid on buying a vehicle; demand for Toyota’s hybrids far exceeds supply and that increased demand ultimately helps Toyota sell non-hybrid vehicles. *Id.* at 89:11-18; 94:18-25. These facts indicate Toyota’s hybrid vehicles, which employ Paice’s technology, generate sales of non-hybrid vehicles as well as accessories, warranties, and other add-ons. *See Georgia-Pacific*, 318 F. Supp. at 1120 (factors 6 & 8).

Fifth, Toyota has introduced new hybrid vehicles, which Paice contends also infringe its patent. *See* Dkt. No. 6, *Paice LLC v. Toyota Motor Corp.*, No. 2:07-CV-180 (E.D. Tex.) (amended complaint alleging, *inter alia*, that Toyota's new hybrid vehicles, the Toyota Camry, Lexus GS450h and Lexus LS600h infringe its '970 Patent). Although these vehicles have not at this time been adjudged to infringe, the fact that Toyota has introduced new hybrid models employing the same, or very similar technology, is evidence of the extent to which Toyota has made use of Paice's invention. *See Georgia-Pacific*, 318 F. Supp. at 1120 (factor 11). Further, Toyota abandoned the technology it employed in the first Prius, which did not use Paice's technology, in favor of the Prius II and subsequent vehicles that do use the Paice technology. *See* Dkt. No. 256, at 54:14–60:3. This conduct indicates the advantages of Paice's technology over the previous technology utilized by Toyota. *See Georgia-Pacific*, 318 F. Supp. at 1120 (factor 9).

In his ongoing royalty analysis, Dr. Troxel began with a baseline royalty rate of 2.25% of the hybrid powertrain value by applying the 25% Rule of Thumb to Toyota's overall profit margin of 9%. Dkt. No. 263, at 17. After considering previously-mentioned factors in addition to Paice's preferred licensing range (\$100-\$200), Dr. Troxel concluded that the appropriate royalty is 2% of the powertrain value, in which he included the value of the internal combustion engine (ICE). *Id.* Although the Court agrees with most of the factors Dr. Troxel considered in support of his royalty rate, the Court finds two parts of his analysis problematic.

First, Dr. Troxel failed to consider the jury's award for past damages in his reasonable royalty analysis. Although Dr. Troxel considered a number of factors relating to the changed circumstances between the pre-infringement hypothetical negotiation and the post-judgment hypothetical negotiation, he failed to consider the jury's damages award.

Second, Dr. Troxel included the value of the internal combustion engine (ICE) in the value of powertrain that he used as the basis for his recommended royalty. The Court finds the ICE should not be included in the powertrain value because (1) the ICE alone is only indirectly related to “hybridness,” as evidenced by the Toyota-Nissan agreement wherein Nissan purchases hybrid powertrains from Toyota but uses its own ICE as well as the other Toyota non-hybrid vehicles; and (2) the ICE portion of the powertrain value is 25-40%, which overshadows the more relevant “core” hybrid features. *See* Dkt. No. 265, at 105:6-12; Plaintiff’s Exh. 107.

3. Court’s Findings

Even though a permanent injunction may no longer be proper in many patent cases in light of *eBay*, an ongoing royalty rate must still adequately compensate a patentee for giving up his right under the law to exclude others from making, using, selling, offering for sale or importing his invention. That is, the law must ensure that an adjudged infringer who voluntarily chooses to continue his infringing behavior must adequately compensate the patent holder for using the patent holder’s property. Anything less would be manifestly unjust and violate the spirit, if not the letter, of the U.S. Constitution and the Patent Act.⁸ Additionally, the Court must be mindful in this case that establishing an ongoing royalty rate has a significant impact on Paice’s ability to license its technology to others and effectively precludes an exclusive licensing arrangement.⁹ The licensing terms must be fair to both parties, but the fact that Toyota is an adjudged infringer who chooses to continue infringing simply cannot be ignored.

⁸ *See* U.S. CONST. art. I, § 8 (“Congress shall have the power to . . . promote the progress of science and useful arts, by securing for limited times to authors and inventors the *exclusive right* to their respective writings and discoveries) (emphasis added). Under this authority, Congress has protected certain “discoveries” through the Patent Act. *See* 35 U.S.C. §§ 1–376.

⁹ *See Georgia-Pacific*, 318 F. Supp. at 1120 (factor 3).

The Court finds the changed factual and legal circumstances, as previously discussed, justify application of the 25% Rule of Thumb to Toyota's profit margin of 9%, thereby yielding a royalty rate of 2.25%. However, the jury's award for past damages, when divided by the number of infringing vehicle sales, counsels in favor of a reduction. Likewise, although the Toyota hybrid vehicles undoubtedly contribute to the success of the entire Toyota product line and help Toyota meet the CAFE standards, the Court finds the royalty rate should also be decreased because Toyota, as a general matter, makes less profit on its hybrid vehicles than its non-hybrid vehicles. *See* Dkt. No. 256, at 234. Therefore, based on these two factors, the Court reduces the 2.25% royalty rate by 1/3, yielding a royalty rate of 1.5%. Finally, the Court finds the ICE should not be included in the royalty base because it is not a core component of Paice's invention. Thus, the 1.5% should be applied to the hybrid powertrain value exclusive of the ICE, which has been determined to be \$6,500 by Dr. Troxel. *See* Dkt. No. 248, Exh. B at 23. Taking 1.5% of \$6500 yields a per- vehicle ongoing royalty of \$98.

The Court finds this rate is reasonable, takes into account the changed legal and factual circumstances occurring since the first hypothetical negotiation, and will adequately compensate Paice for Toyota's continued infringement. This rate also accounts for the jury's award for past infringement and the lower profit margin Toyota generally receives on its hybrid vehicles. To adjust for inflation, allow for the use of publicly-available documents for verification, and keep clever powertrain cost accounting from changing the royalty, the Court has scaled the ongoing royalty as a percentage of wholesale vehicle price.¹⁰ The result is less than 0.5% of the wholesale price for

¹⁰ *See* Dkt. No. 248, Exh. B at 55 (invoice prices of \$20,419 for the Prius, \$30,329 for the Highlander, and \$37,894 for the Lexus RX400h).

each of the vehicles—specifically, 0.48% for the Prius, 0.32% for the Highlander, and 0.26% for the Lexus RX400h. These royalty rates continue to allow Toyota to make a reasonable profit. The Court additionally notes that Toyota continues to have the option of ceasing its infringing use of the Paice technology or raising prices to pass along the royalty to its consumers.

V. CONCLUSION

On remand, the Court has given the parties full and fair opportunity to set their own ongoing royalty rate. Having failed to come to an agreement, the Court finds, based on the evidence submitted at the evidentiary hearing, that significant changes in the legal relationship between the parties as well as other economic factors justify the imposition of a different royalty rate to compensate Paice for Toyota's continued, voluntary, and willful infringement. After considering the expert testimony, as well as the jury award, the Court concludes the appropriate ongoing royalty rate, which automatically adjusts for inflation is as follows: 0.48% of the wholesale price for each Toyota Prius, 0.32% for each Toyota Highlander, and 0.26% for each Lexus RX400h sold after final judgment was entered for the remaining life of the '970 Patent.

An Amended Final Judgment consistent with this Opinion & Order is entered contemporaneously herewith.

SIGNED this 17th day of April, 2009.

A handwritten signature in black ink, appearing to read "David Folsom", is written over a horizontal line.

DAVID FOLSOM
UNITED STATES DISTRICT JUDGE